UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,347	05/09/2001	Mamoru Aoki	313KA/49958	3042

7590 09/10/2002

CROWELL & MORING, LLP
Intellectual Property Group
P.O. Box 14300
Washington, DC 20044-4300

EXAMINER
ELKASSABGI, HEBA

ART UNIT	PAPER NUMBER
2834	

DATE MAILED: 09/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/851,347	AOKI ET AL.	
	Examiner	Art Unit	
	Heba Elkassabgi	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1 and 2 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-2 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Obara U.S. 5841210 as applied to claim 1 and 2 above, and further in view of Yoshimura et al U.S. 5510661.

Obara discloses in Fig. 1 a motor in which the stator and rotor are covered by a housing, a ball bearing between the housing and shaft, an inner peripheral surface for the housing, a bearing with inner and outer race, an inner race having an inner peripheral surface, an outer race having an outer peripheral surface, the inner race being fixed to the shaft through press-fitting between the outer peripheral surface of shaft and inner peripheral surface inner race, the outer race being fixed to the housing through press-fitting between outer peripheral surface of outer race and inner peripheral surface of housing, but does not disclose a shaft with outer grooved peripheral surface.

Yoshimura et al. discloses a shaft in Fig. 1 with an outer knurled portion of the peripheral surface in which the inner race is fixed to the shaft through one press-fit and by an adhesive between the outer peripheral surface of the shaft and the inner peripheral surface of the inner race for the purpose of the knurls help providing a reliable bond between the inner race and the shaft.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Obara's invention by adding an outer knurled portion of the peripheral surface of the shaft for the purpose of the knurls help providing a reliable bond between the inner race and the shaft.

Response to Applicants Remarks

In response to applicant's remarks to paragraph 4, to the reading of *In re Aller* the Examiner maintains rejection of the claims based on the case law. The broad holding of *In re Aller* is recited in three areas. First, the headnote one of *In re Aller*, stating; "Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation."

Second, This position is supported by the holding of *In re Swain et al.* as cited in *In re Aller* on page 237 first full paragraph. That "No invention is involved in discovering optimum ranges of a process by routine experimentation". (In re Swain et al., 33 C.C.P.A. (patents) 1250,156 F2d 239, 70 USPQ 412.)

Third, the holding of *In re Aller* is supported by the MPEP in section 2144.05 II. The court held that a person of ordinary skill in the art would logically assume that a higher yield could be obtained and by experimentally varying conditions to achieve the most productive conditions. In the instant application Yamashita et al. teaches the bearing is on knurled grooves, where a person of ordinary skill in the art would assume according to *In re Aller* that the most productive conditions can be achieved by varying the known condition, that being the number of knurls. Those the rejection is proper and maintained.

The applicants argument in regards to the two conditions required by *In re Aller* is non persuasive. *In re Aller* does not disclose the requirement of (1) discovery of the optimum or workable ranges and (2) the discovery made by routine experimentation, nor does the MPEP section 2144.05 II suggest that these conditions need to be meet. *In re Aller* only states that for an inventor to discover the optimum or workable range of a known condition requires only ordinary skill in the art. In the instant application the applicant has merely determine the workable range of knurls that is disclosed in Yamashita et al.

The applicant's argument that the claimed invention is a keen insight in to the number of knurls and rolling members is not persuasive in that the applicant's formulas involve discovering a workable range. Though, the applicant does state a difference over Yamashita et al. in defining the number of knurls in regards to rolling members it is

not a patentable difference, because *In re Aller* holds that merely determining the optimum working conditions is within ordinary skill in the art.

Applicant's argument states that he is not discovering an optimum or workable range of knurls is not persuasive because the claims specifically define a working ratio.

The examiner has set for the a prima facie case of obviousness as set for the in MPEP section 2144.05 II .The applicant has failed to overcome this rejection as set forth in MPEP section 2144.05 III with a showing of unexpected results or with a showing of the art teaching away from the claimed ratio. Therefore, the rejection is maintained.

Conclusion

1. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heba Elkassabgi whose telephone number is (703) 305-2723. The examiner can normally be reached on M-Th (6:30-3:30), and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

NESTOR RAMIREZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

Heba Yousri Elkassabgi
September 4, 2002